

Amend

annealing the amorphous silicon layer.

11. (Amended) The method of claim 1, wherein the inducing substance for silicon crystallization is a transition metal.

A2

12. (Amended) The method of claim 1, wherein the inducing substance for silicon crystallization is a noble metal.

A3

16. (Amended) A method of crystallizing amorphous silicon, comprising:
depositing an inducing substance for silicon crystallization on an amorphous silicon layer
by plasma exposure while annealing is carried out on the amorphous silicon layer.

Sub B1

22. (Amended) A crystallizing apparatus, comprising:
a chamber having inner space;
a substrate support arranged in the chamber, the substrate support being used for
supporting a substrate having an amorphous silicon layer formed thereon;
a plasma generating device having a metal source connected to a power supply, the
plasma generating device producing plasma inside the chamber by supplying the metal bar with
RF or DC power from the power supply to deposit a crystallization catalyst on the substrate;
a heater arranged at the substrate support, the heater supplying the substrate with heat for
performing crystallization while the plasma generating device produces plasma inside the
chamber.

A4

Please ~~cancel~~ claims 20, 21 and 23.

Please ~~add~~ the following new claims:

-- 26. The method of claim 1, wherein substantially the entire amorphous silicon layer is crystallized in less than about one hour.

27. The method of claim 1, wherein substantially the entire amorphous silicon layer is crystallized in less than 50 minutes.

28. The method of claim 1, wherein substantially the entire amorphous silicon layer is crystallized in about 10 minutes.

AG 29. The method of claim 1, wherein the depositing and the annealing are carried out in one chamber.

30. The method of claim 1, wherein the annealing is carried out in presence of a plasma.

31. The method of claim 2, wherein substantially the entire amorphous silicon layer is crystallized in less than about one hour.

32. The method of claim 2, substantially the entire amorphous silicon is crystallized

in less than is less than 50 minutes.

33. The method of claim 2, wherein substantially the entire amorphous silicon is crystallized in about 10 minutes.

34. The method of claim 2, wherein the depositing and the annealing are carried out in one chamber.

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35. The method of claim 2, wherein the annealing is carried out in presence of a plasma.

36. The method of claim 16, wherein substantially the entire amorphous silicon layer is crystallized in less than four hours.

37. The method of claim 16, wherein substantially the entire amorphous silicon layer is crystallized in less than 50 minutes.

38. The method of claim 16, wherein substantially the entire amorphous silicon layer is crystallized in about 10 minutes.

39. The method of claim 16, wherein substantially the inducing substance is deposited on an exposed surface of the amorphous silicon layer.